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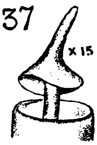

lid adheres to it and is raised upon it, as in Fig. 37.

Constricted, used of capsules that become narrowed under the mouth when dry. (Fig. 32.)

Contracted, see *constricted*.

INJURY DONE TO MOSSES BY INSECTS.

By G. N. Best.

MOSSES furnish an excellent harbor for insects which in turn feed upon, mutilate and destroy them. From a diagnostic standpoint the injury they inflict is of importance since it modifies to a considerable extent the normal characters. When mosses are seriously injured, they show it in their short, stubby branches and in their withered, shrunken, often contorted and discolored leaves. The stems are the parts most commonly attacked. On these appear minute reddish-brown spots or nodules, usually with a central perforation, around which the tissues are necrosed and thickened. These spots not rarely coalesce to form patches, girdling the stem in such a way as to interfere with its nutrition. Less often the midribs, the pedicels and the capsules are attacked in the same manner. A common seat of injury is about the base of the capsule which then rarely attains a normal development, the peristome suffering most. When the stems are affected the areolation of the leaves is often quite abnormal, the basal and alar cells especially. Sometimes the cells of one-half of a leaf differ from those of the other half. In fact these deformities not rarely so obscure the normal characters, as to give grounds for a suspicion that a new species is at hand; and it is quite probable that not a few species owe their existence more to insects than to nature.

NEW AMERICAN MOSSES.

Grimmia Evansi E. G. Britton. *Rhodora* 1: 148, 1899, *pl.* 7, "Plants forming low, dense, dirty tufts of a dark green or yellowish brown color, only the uppermost ends of the branches being green and free from gravel. Stems about 15$^{\text{mm.}}$ high, with short fastigiate branches 5$^{\text{mm.}}$ long, naked and radiculose below, crowded above with spreading leaves which are about 1$^{\text{mm.}}$ long by 0.5–0.7$^{\text{mm}}$ broad, oblong, concave, acute or apiculate with inrolled margins above, forming a more or less cucullate apex, the stout vein ending in or just below the point which occasionally is formed by a single short hyaline cell; apical cells rounded and indistinct, slightly sinuous, composed more or less of two irregular layers of cells, or frequently with only one layer and occasional groups of bistromatic cells here and there, not papillose, but the thickened walls of the apical cells giving an irregular outline to the cross-sections of the leaves; basal cells in one layer, more distinct, oblong or quadrate, .013–.021$^{\mathrm{mm}}$. in diameter. Dioicous, only male plants collected, antheridia large, bright yellow, with or without paraphyses.

On rocks, Tuckerman's Ravine, Mt. Washington, N. H., alt. 1,230$^{\mathrm{m}}$., July 30, 1890. Collected by Dr. Alexander W. Evans of Yale University, to whom this species is dedicated in recognition of his services to American bryology. Dr. Evans' specimens have been compared with *Grimmia cæspiticia* (Brid.) Jur., (*G. sulcata* Sauter) and with Limpricht's description and figures (Rab. Kryptfl. **4**: 2, 778, *fig. 203*). Though closely resembling this species in the form and structure of the leaves, ours lack the two prominent folds of the European species and the plants are coarser and more loosely tufted."

ENTOSTHODON LEIBERGII, sp. nov. E. G. Britton.

PLANTS gregarious; stems short, 5$^{\mathrm{mm}}$., simple or divided at base, naked below, leaves crowded at summit, the largest 2–3$^{\mathrm{mm}}$. long by 1$^{\mathrm{mm}}$. wide, oblong-lanceolate, acute or apiculate, the vein ending in or below the apex or excurrent into a subulate point, serrate, above, marginal cells somewhat longer and narrower, but not bordered, those of the basal angles occasionally inflated, forming an auricle; perichetial leaves smaller, generally entire, with the vein ending far below the apex. Autoicous; seta 5–10$^{\mathrm{mm}}$. long, pale, becoming red brown as well as the mature capsule, which is globose-pyriform, 1-2$^{\mathrm{mm}}$. long, with a tapering neck; stomata numerous; lid convex, bordered with yellow, the marginal cells quadratic in straight rows, the inner smaller, irregular and oblique; mouth slightly flaring when dry, bordered by 4-8 rows of transversely elongated cells and one row of orange-colored smaller cells; annulus none; peristome short, rudimentary, teeth irregular, divided, orange-colored; spores rough, .025–.029$^{\mathrm{mm}}$. rusty brown.

In wet, springy places near Hope, Idaho, at 2100 feet, May, 1892. Collected by John B. Leiberg, to whom this species is dedicated. Nearest to *Entosthodon ericetorum* C. M. (*Funaria obtusa* Lindb.), from which it differs in its larger size, broader leaves without the narrow border of cells, so markedly shown in No. 281 of Wilson's Musci Brittanici.